

ABSTRACT

An optical add-drop multiplexer successively comprises a first ferrule, a first graded index (GRIN) lens with a bandpass filter attached thereon, an optical crystal, a second GRIN lens, and a second ferrule. An input and an output optical fiber are stationed in the first ferrule, and a dropping and an adding optical fiber are stationed in the second ferrule. An optical multiplexed signal from the input optical fiber is transmitted through the first GRIN lens to the bandpass filter. From the bandpass filter, an optical signal having a wavelength identical to a central wavelength of the bandpass filter is output to the dropping optical fiber, and other optical signals having other wavelengths are coupled with an optical signal from the adding optical fiber having a wavelength identical to the central wavelength of the bandpass filter and are transmitted to the output optical fiber.